

Attachment H

Proposal # 2001- K-216 (office use only)

**PSP Cover Sheet**

Proposal Title: Evaluation of Rearing Habitat Within the Cosumnes River

Applicant Name: The Fishery Foundation of California

Contact Name: Trevor Kennedy (Project Manager)

Mailing address: 2300 Q Street. Sacramento, CA. 95816

Telephone: 209.649.8914

Fax: 925.944.3514

Email: turok@inreach.com

Amount of funding requested: \$103,705.50

Cost share partners ☒ Yes ☐ No

Identify partners and amount contributed by each: The fishery Foundation of California will donate materials and equipment for project management and implementation in the sum of \$8,794.50.

Indicate the Topic **for** which **you** are applying (Check only one **box**).

- |  |  |
|--|--|
| <input type="checkbox"/> Natural Flow Regimes                | <input type="checkbox"/> Beyond the Riparian Corridor                          |
| <input type="checkbox"/> Nonnative Invasive Species          | <input type="checkbox"/> Local Watershed Stewardship                           |
| <input type="checkbox"/> Channel Dynamics/Sediment Transport | <input type="checkbox"/> Environmental Education                               |
| <input type="checkbox"/> Flood Management                    | <input type="checkbox"/> Special Status Species Surveys and Studies            |
| <input type="checkbox"/> Shallow Water Tidal/Marsh Habitat   | <input checked="" type="checkbox"/> Fishery Monitoring Assessment and Research |
| <input type="checkbox"/> Contaminants                        | <input type="checkbox"/> Fish Screens  |

What County or Counties is the project located in? Sacramento County

What **CALFED** ecozone is the project located in? Eastside Delta Tributaries (1.1.1 Cosumnes River).

Indicate the type of applicant (check one box only):

- |  |  |
|--|--|
| <input type="checkbox"/> State agency                    | <input type="checkbox"/> Federal agency        |
| <input type="checkbox"/> Public/Non-profit joint venture | <input checked="" type="checkbox"/> Non-Profit |
| <input type="checkbox"/> Local government/district       | <input type="checkbox"/> Tribes                |
| <input type="checkbox"/> University                      | <input type="checkbox"/> Private party         |
| <input type="checkbox"/> Other:                          |  |

Indicate the primary species which the proposal addresses (Check all that apply):

X San Joaquin and East-side Delta tributaries fall-run chinook salmon

☐ Winter-run chinook salmon

☐ Spring-run chinook salmon

X Late-fall run chinook salmon

X Fall-run chinook salmon

☐ Delta Smelt

☐ Longfin smelt

☐ Splittail

☐ Steelhead trout

☐ Green sturgeon

☐ Striped bass

☐ White sturgeon

☐ Ail chinook species

☐ Waterfowl and shorebirds

☐ All anadromous salmonids

☐ Migratory birds

☐ American shad

☐ Other listed T/E species:

Indicate the type of project (check only one box):

X Research/monitoring

☐ Watershed planning

☐ Pilot/demo project

☐ Education

☐ Full scale implementation

Is this a next-phase of an ongoing project

Yes ☐ No X

Have you received CALFED funding before?

Yes X No ☐

If yes, list project title and CALFED number: Cosumnes River Salmonid Barrier Improvement

Project #98-B1009

Have you received funding from CVPIA before

Yes X No ☐

If yes, list CVPIA program providing funding, project title and CVPIA number: Juvenile salmon distribution in the Stanislaus River: Cooperative Agreement #114200J033-USFWS

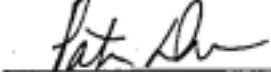
By signing below, the applicant declares the following:

- The truthfulness of all representations in their proposal;
- The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
- The person submitting the application has read and understood the conflict of interest and confidentiality discussion on the PSP (Section 2.4) and waives any and all rights of privacy and confidentiality of the proposal on behalf of the applicant to the extent as provided in the Section.

Patricia Duran

Executive Director

Fishery Foundation of California



Signature of applicant

## B. Executive Summary

Title of Project: Cosumnes River Comparative Rearing Research Project.

Amount requested: \$103,705.50

Applicant Name: The Fishery Foundation of California

Primary Contact: Trevor Kennedy, Project Manager Address: 2300 Q Street. Sacramento, CA. 95816 Phone: 916.341.0224 Fax: 925.944.3514 Email: [turok@jeach.com](mailto:turok@jeach.com)

### Project Description:

The Fishery Foundation of California (FFC) requests funding from CALFED/CVPFA to conduct fisheries research targeted at eliminating scientific uncertainties surrounding the relative value of mainstem river, floodplain, secondary channel, and non-natal tributary habitats as rearing habitats for juvenile salmon. The proposed study would provide critical information on the relative density, fitness, and mortality factors associated with juvenile salmon rearing within mainstem river, floodplain, secondary channel, and non-natal tributary habitats. The information derived through this research would provide insight into the relative value of these types of rearing habitat. Such data could be used to guide future management decisions and prioritize restoration actions within the Cosumnes River and throughout the Central Valley.

The FFC proposes to test the following hypotheses:

Hypothesis 1a: Densities and growth rates of chinook salmon are similar between seasonally inundated floodplain habitats, naturally occurring secondary channel habitats, and non natal tributaries such as Deer Creek.

Hypothesis 1b: Chinook salmon who rear in the Cosumnes River mainstem will occur in lower densities and exhibit reduced fitness and growth rates relative to those found in floodplain, secondary channel, and non-natal tributary habitats.

Hypothesis 2: Isolated floodplain restoration projects created by breaching levees such as the Cosumnes River Preserve have a much higher probability of stranding chinook salmon than do secondary channel and non-natal tributary habitats.

Hypothesis 3: The relative predation risk to juvenile salmon is greater in isolated floodplains than in mainstem river, secondary channel, and non-natal tributary habitats.

### Applicability to ERP goals:

**Goal 1: At Risk Species** The proposed project would provide critical information the rearing needs of East-Side Delta Tributary Fall-run chinook salmon, a CALFED Priority Species. Such knowledge would allow managers to make more informed decisions on how to increase juvenile salmon production and thus reverse the downward population trend.

**Goal 4: Habitats** The proposed project would eliminate many of the questions surrounding the relative value of floodplains as rearing habitat for priority species such as East Side Delta Tributary and late fall run chinook salmon.

**Goal 5: Non-Native Invasive Species** The proposed project would provide important insight into the relative use of non-native fish within the four habitats. The knowledge gained may prove useful in designing new restoration projects and in adaptively managing existing projects to preclude non-native species.

### C. Project Description

The Fishery Foundation of California (FFC) requests funding from CALFED/CVPIA to conduct fisheries research targeted at eliminating scientific uncertainties surrounding the relative value of mainstem river, floodplain, secondary channel, and non-natal tributary habitats as rearing habitats for juvenile salmon. The proposed study would provide critical information on the relative density, fitness, and mortality factors associated with juvenile salmon rearing within mainstem river, floodplain, secondary channel, and non-natal tributary habitats. The information derived through this research would provide insight into the relative value of these types of rearing habitat. Such data could be used to guide future management decisions and prioritize restoration actions within the Cosumnes River and throughout the Central Valley.

#### 1. Statement of Problem

##### a. Problem

The abundance of juvenile salmon is a function of many factors including the abundance of newly emerged fry, quantity and quality of suitable habitat, abundance and composition of food, and interactions with other fish, birds and mammals (Bjornn and Reiser, 1991). A great deal of scientific uncertainty exists on the relative value of mainstem river, floodplain, secondary channel, and non-natal tributary habitat as rearing areas for juvenile chinook salmon. Equally little is known on how these habitats limit rearing within the Cosumnes and other Central Valley rivers. Studies conducted on the Cosumnes River Preserve, a non-engineered, isolated floodplain and on the Yolo Bypass have demonstrated that floodplains provide highly productive rearing habitat for juvenile chinook salmon (Sommer, et al., 1998), (Whitener and Kennedy, 1999). The data also suggest that these benefits may be offset by increased mortality through predation and stranding (Whitener and Kennedy, 1999), (Kennedy and Whitener 1999)(Sommer, et al., 1998). Other studies cite an incomplete understanding of the role of shallow water habitat for fish (Grimaldo, et al., 1998). CALFED and The Nature Conservancy have invested significant resources in restoring floodplain habitat in the Cosumnes River Preserve and in the McCormick-Williamson Tract. Information regarding the benefits accrued to juvenile salmon by such projects is necessary to fully evaluate their effectiveness both within the Cosumnes and throughout the Central Valley. The Corps of Engineers' Feasibility Study, CALFED 99', is charged with exploring options for habitat restoration via levee breaches, setbacks, and river/floodplain reconnections. Sufficient knowledge on the relative benefits of these types of projects is essential for an adaptive decision making process. Targeted research is needed to **assess** the relative value of floodplain, secondary channel and non-natal tributaries as juvenile chinook rearing habitat so that present and future restoration actions can be adaptively managed to provide the greatest net benefit to Central Valley chinook salmon. The FFC proposes to address the scientific uncertainties surrounding the relative densities, fitness, and mortality factors (stranding and predation) of juvenile chinook salmon rearing in these habitats.

The objectives of the proposed project are:

1. Quantify and compare densities of juvenile salmon within the four target habitats.
2. Compare growth rates and fitness of juvenile salmon within the four target habitats.

3. Compare the relative mortality factors (Stranding and Predation) associated with the four target habitats.

b. Conceptual Model/Adaptive Management

The Cosumnes River presently supports a variable run of fall-run chinook salmon. The run has been diminished to only a few hundred spawning individuals because of habitat degradation, the loss of fall attraction flows, and barriers to migration. The relatively low upstream escapement results in low juvenile densities compared to the habitat available in the river. **Talk** about density dependent relationships re rearing **as** noted in **the** green book. Offers a unique opportunity to study density independent habitat use by salmon.

Densities

The Cosumnes River mainstem in itself **has** very little suitable rearing habitat due to its **channeled** condition over most of its length. The Cosumnes River is characterized by steep banks that concentrate higher velocity flows within the main channel (Williams, **1997**). The present condition provides relatively little low velocity habitat for juvenile salmon. Lack of shallow water habitat within the mainstem would suggest lower invertebrate production and increased deep-water predators (Schlosser, **1991**). The relatively low densities at which salmon occur in the Cosumnes River would allow for juveniles to seek out and occupy the more productive floodplain, secondary channel, and non-natal tributary habitats. Information on the relative densities within the various habitats would provide key insight into which factors limit rearing both in the Cosumnes River and throughout the Central Valley. Information of this nature is critical to the adaptive management process.

Comparative fitness

Shallow and backwater habitats such as floodplain, side channel, and non-natal tributaries are typically warmer **than** river habitats and thus produce higher concentrations of invertebrates and other prey items for juvenile fish. Often times, water velocities within these habitats are lower than in the mainstem which allows for less energy expenditures and a higher proportion food consumption utilized for growth. The combination **of** these factors lead to faster molting rates and larger size at the time of smolting which in turn increases survival rates and ultimately production. There is presently much uncertainty **as** to the comparative fitness of salmon rearing withii these types of habitat. Targeted research aimed at eliminating these uncertainties is crucial for prioritizing habitats for restoration.

Stranding and Predation

It has been documented that shallow water habitats provide highly productive rearing areas for juvenile salmon resulting in higher feeding success and subsequent growth rates (Kennedy and Whitener, **1999**), (Schlosser, **1991**), (Sommer, et **al**, **1998**). The benefits accrued to salmon by these habitats, however, **are** meaningless if the salmon are unable to return to the migration corridor. Studies conducted in the Cosumnes River Preserve and Yolo Bypass suggest that these habitat may be a source of stranding for the juvenile fish that use them (Kennedy and Whitener, **1999**) (Sommer et **al**, **1998**). Additionally, the

potential exists for an increase in predation to juvenile salmon rearing within these habitats. Comparative data on stranding frequency, predatory species composition, and predation rates within these habitats is insufficient. Targeted research aimed at providing this data is crucial for the adaptive management of existing projects and the creation of new projects.

c. Hypotheses Being Tested

Hypothesis 1a:

Densities and growth rates of chinook salmon are similar between seasonally inundated floodplain habitats, naturally occurring secondary channel habitats, and non natal tributaries such as Deer Creek.

Hypothesis 1b:

Chinook salmon who rear in the Cosumnes River mainstem will occur in lower densities and exhibit reduced fitness and growth rates relative to those found in floodplain, secondary channel and non-natal tributary habitats.

Hypothesis 2:

Isolated floodplain restoration projects created by breaching levees such as the Cosumnes River Preserve have a much higher probability of stranding chinook salmon than do secondary channel and non-natal tributary habitats.

Hypothesis 3:

The relative predation risk to juvenile salmon is greater in isolated floodplains than in mainstem river, secondary channel, and non-natal tributary habitats.

**2. Proposed Scope of Work**

The following section provides specific details of the proposed targeted research designed to address **the** scientific uncertainties outlined above.

**a. Location and/or Geographic Boundaries of the Project**

The proposed targeted research will be conducted within the Cosumnes River (Figure 1) from Wilton Rd. down to the confluence with the Mokelumne River. Additional work will be conducted on The Nature Conservancies "Cosumnes River Preserve". The project is fully contained within Sacramento County and is part **of** the East Side Delta Tributary Ecological Zone. The approximate project center point is 121° 20' 40" N by 38° 21' 10" E. The Project boundaries fall within the active stream channel of the Cosumnes River from Wilton Road to the confluence with the Mokelumne River.



Figure 1. Cosumnes River Study Area (Source: AFRP web site).

#### b. Approach

The following section lists the hypotheses being tested and outlines the proposed approach.

##### Task 1. Sample site selection:

Prior to sampling, reconnaissance surveys will be conducted to establish index sites in both the Cosumnes River and in Deer Creek. Six sites representing the range of conditions within each habitat will be flagged and logged with a hand held GPS for future studies. Index sites within the floodplain and secondary channel habitats have already been established and recorded. Additional contingency sites in each of the four habitats will be added to allow for sampling during periods of excessively high flow or other unforeseen circumstances.

##### Task 2. Densities and fitness:

###### **Hypothesis 1a:**

Densities and growth rates of chinook salmon are similar between seasonally inundated floodplain habitats, naturally occurring secondary channel habitats, and non natal tributaries such as Deer Creek.

###### **Hypothesis 1b:**

Chinook salmon who rear in the Cosumnes River mainstem will occur in lower densities and exhibit reduced fitness and growth rates relative to those found in floodplain, secondary channel, and non-natal tributary habitats.

**Approach:**

Index reaches established in each of the four habitat types under task 1 will be sampled weekly using beach seines (30,50, and 100ft X ft), fyke nets, or a backpack electrofisher depending on prevailing conditions. Sampling will occur from January through May or until it has been determined that no salmon remain in the system. Temporal densities within each habitat type will be estimated by plotting the catch per unit of the sampling effort (CPUE) over time. All salmon captured over the period of study will be measured to the nearest (mm) and weighed to the nearest 0.1 gram. The relative fitness of salmon between habitats will be compared by analyzing length weight relationships using methods described in Anderson and Gutreuter (1992). Growth rates may be expressed as the mode of the length frequency distribution of juvenile salmon captured over time.

**Task 2. Stranding:**

**Hypothesis 2:**

Isolated floodplain restoration projects created by breaching levees such as the Cosumnes River Preserve have a much higher probability of stranding chinook salmon than do secondary channel and non-natal tributary habitats.

**Approach:**

Quantify and compare spatial and temporal occurrence of stranding within floodplain, secondary channel, and non-natal tributary habitats relative to river stage at McConnell, including river stage needed to inundate these habitats and the topographic features that disconnect them from the river as stage recedes. When stranding is observed short-term mark and recapture methods will be employed to quantify juvenile salmon within the stranded habitats. Plotting the catch per unit of the sampling effort may be used to compare densities of stranded salmon within each habitat.

**Task 3. Predation:**

**Hypothesis 3:**

The relative predation risk to juvenile salmon is greater in isolated floodplains than in mainstem river, secondary channel, and non-natal tributary habitats.

**Approach:**

Predatory species composition and densities within each habitat will be determined by methods outlined in task 1 above. Additional methods such as hook and line and gill nets may also be employed if needed. Gut contents will be analyzed for the presence of salmon and extrapolated to the estimated densities of each predatory species. Tethering studies as described in Grillo, et al. (2000) will be used to compare the relative predation rates between river, secondary channel, floodplain, and non-natal tributary habitats. Three groups of five individually tethered salmon will be deployed in each habitat type. The sample sites will be selected to represent the range conditions within each habitat type. Tethering experiments will be conducted both day and night so that comparisons can be made. For purposes of verification, experiments will be replicated within one week of the initial experiment.



c. **Data Handling and Storage**

Data will be entered into Microsoft Excel or Microsoft Access by the principal investigator and updated into a master database that will be made available to AFRP, CVPIA, and IEP for review.

d. **Expected Products/Outcomes**

Progress reports will be prepared monthly throughout the sampling period and compiled quarterly for submittal to CALFED for review. A final report summarizing the collected data will be submitted at the end of the sampling period. Oral presentations summarizing the data will be performed if necessary.

e. **Work Schedule**

The following work schedule assumes that approval for funding will occur in October of 2000.

The proposed **start** and finish dates are October 2000 and June 2001 respectively.

Task 1 (Site selection and preparation) will begin when funding for the project **has** been announced (Oct.) and run for three weeks thereafter (late Oct, early Nov.).

Task 2 (Determine juvenile densities and fitness) will take place from when juvenile salmon begin to emerge to when they exit the system (Jan-May).

Task 3 (Determine stranding rates) will depend upon when stranding is observed within the various habitats. Past experience within the watershed suggests that this is likely to occur within the months of April and May.

Task 4 (Determine predation rates) requires no set timeline, **as** it is an independent experiment. The proposed month in which the experiment will occur is April.

Task 5 (Report preparation) will occur in June of 2001 after completion of all data collection.

Task 6 (Project management) will run the entire length of the project. The project manager will be involved with project activities approximately halftime. Management activities include quality control, data entry and storage, and ensuring that field activities meet the objectives of the project.

Tasks 2, 3, and 4 can be funded separately and included with tasks 1, 5, and 6, which are considered inseparable.

f. **Feasibility**

Project researchers have sampling permits that may require amendments to fit within the proposed activities associated with the project. Listed fish species that may be encountered during project activities are limited to the Sacramento Splittail and possibly steelhead. Upon notification of funding, requests for **all** necessary amendments will be sent to the appropriate agencies. The Cosumnes River has an extremely variable flow regime due to its' unimpounded condition. Alternate, high flow sites established during task 1 should allow for the proposed sampling activities to occur during an adequate range of flows. Permission for access has been granted in all of the established sampling sites. Permission for access onto additional sites established during reconnaissance surveys **of** the Cosumnes River and Deer Creek will not be a problem given the working relationship shared by the FFC and numerous landowners/groups within the watershed.

**D. Applicability to CALFED ERP Goals and Implementation Plan and CVPIA Priorities**

**1. ERP Goals and CVPIA Priorities.**

The proposed research is consistent with CALFED, CVPIA, DFG, and FWS vision to protect, restore, and enhance the natural production of anadromous fish populations within the Central Valley.

**ERP Goals**

**Goal 1: At Risk Species**

The proposed project would provide critical information the rearing needs of East-Side Delta Tributary Fall-run chinook salmon, a CALFED Priority Species. Such knowledge would allow managers to make more informed decisions on how to increase juvenile salmon production and thus reverse the downward population trend.

**Goal 4: Habitats**

The proposed project would eliminate many of the questions surrounding the relative value of floodplains as rearing habitat for priority species such as East Side Delta Tributary and late fall run chinook salmon.

**Goal 5: Non-Native Invasive Species.**

The proposed project would provide important insight into the relative use of non-native fish within the four habitats. The knowledge gained may prove useful in designing new restoration projects and in adaptively managing existing projects to preclude nonnative species.

**CVPIA**

(3402-a) To protect, restore and enhance fish, wildlife, and associated habitats in the Central Valley.

(3406-b-1-a) Develop and Implement a program to double the natural production of anadromous fish in the Central Valley over levels that existed 1967-1991.

**2. Relationship to Other Ecosystem Restoration Projects.**

The proposed study is intrinsically linked to other restoration projects relating to juvenile salmon rearing via habitat improvement and creation within the Central Valley. CALFED and The Nature Conservancy have invested significant resources in restoring floodplain habitat in the Cosumnes River Preserve and in the McCormick-Williamson Tract. Information regarding the benefits accrued to juvenile salmon by such projects is necessary to fully evaluate their effectiveness both within the Cosumnes and throughout

the Central Valley. The Corps of Engineers' Feasibility Study, CALFED 99', is charged with exploring options for habitat restoration via levee breaches, setbacks, and river/floodplain reconnections. Sufficient knowledge on the relative benefits of these types of projects is essential for decision making process. Targeted research is needed to assess the relative value of floodplain, secondary channel and non-natal tributaries as juvenile chinook rearing habitat so that present and future restoration actions can be adaptively managed to provide the greatest net benefit to Central Valley chinook salmon.

### **3. Previous Recipients of CALFED or CVPIA Funding.**

The FFC has managed two previous CALFED/CVPIA funded projects:

#### CALFED

- 1.. The Cosumnes River Salmonid Barrier Removal Project- FFC and TNC (Proposal Number 98-B1009). The project is currently in the implementation phase with construction to begin in July of 200.

#### CVPIA

2. Juvenile Salmon Distribution in the Stanislaus River. (Cooperative Agreement #114200J033-USFWS). The FFC is working with the CVPIA to determine spatial and temporal distributions of juvenile chinook salmon and steelhead within the Stanislaus River.

### **4. System-Wide Ecosystem Benefits**

The proposed project compliments several programs and CALFED funded projects within the Cosumnes River:

- The Cosumnes River Salmonid Barrier Removal Project, funded by CALFED in 1998 is intended to improve passage for late-fall chinook at several known barriers along the migration corridor. The proposed project is an integral step in designing projects to improve rearing conditions within the Cosumnes River. Spawning and rearing are intrinsically linked in an ecosystem-based approach to restoring riverine habitats.
- The Cosumnes River Preserve levee breach project, which provides critical habitat for waterfowl, shorebirds, and complexes of native and non-native fish including fall-run chinook salmon. The knowledge gained from the proposed project would provide information critical in the management of for juvenile salmon. It would also guide managers in prioritizing reaches for restoration further up the watershed.
- The Army Corps of Engineers' Feasibility Study, which is responsible for recommending ecosystem restoration/flood control measures such as, levee breaches, levee setbacks, and river floodplain reconnections. An adaptively managed decision making process requires an understanding of the limiting factors to target species well being. The proposed project would provide critical information on this subject.

## **E. Qualifications**

**Mr.** Kennedy has a B.S. in fisheries from Humboldt State University. He has participated in and managed fishery restoration and research projects in the Central Valley for five years. He **has** worked on many issues within the Cosumnes River for three years and has a working relationship with many landowners along the river. He has extensive experience relevant to the proposed project. He developed and implemented measures to improve fish passage on the Cosumnes River via the Cosumnes River Salmonid Passage Improvement Project (CALFED 98). He developed methodologies to determine spatial and temporal densities and distribution of juvenile chinook salmon and steelhead within the Stanislaus River by direct observation. He has also contributed to the present understanding of how juvenile fish utilize floodplain habitats within the Cosumnes River and is currently working with the Anadromous Fish Restoration Program (AFRP) to determine habitat preferences; residence time, and the degree of stranding of juvenile chinook salmon within the Cosumnes River Preserve.

## **F. Cost**

### **1. Budget**

The total budget by task and budget details are provided in Table 1.

#### Salaries:

The project managers salary is set at \$30/hr. His individual overhead costs are included in this rate. **An** explanation of the overhead is included in the explanation of salaries and benefits section below. The field technician class 1 salary is set at \$15/hr as he/she will be responsible for project supervision in the absence of the project manager. Field technician class 2 rates are set at \$12/hr.

#### Travel:

Travel rates are set at \$0.32/mile. This cost covers gas, vehicle insurance, and maintenance for employees working on respective projects. Mileage estimates were based on an estimated 30 mile one way drive for all employees per day of work. Actual distances may vary depending upon site location and car-pooling.

#### Supplies and expendables:

Supplies and expendables were estimated from expense records from past projects of this type. Materials included in this category are, miscellaneous data recording equipment, headlamps for night surveys, flagging and hip chains for site selection, and additional nets.

#### Equipment:

To allow for the transport of equipment when an ATV is the only viable form of transportation, **an** ATV trailer will be purchased. The average cost of a suitable trailer was \$1,000.

#### Service Contracts:

Radman Arial Surveys may be contracted out, if necessary, to supplement available photographs of the Cosumnes River. This cost was inserted as a contingency and may not be used.

Table 1. Summary budget for tasks 1-4 of the Cosumnes River Comparative Rearing Research Project.											
Year	Task	Direct Labor Hours	Subject to Overhead						Exempt from Overhead		Total Cost
			Salary	Benefits	Travel	Supplies & Expendables	Service Contracts	administrative overhead @9%	Equipment	Graduate Student Fee Remission	
<b>Year 1</b>	<b>Task 1</b>	Site selection and preparation (Oct-Nov)									
	Project Management	120	\$4,200	\$1,050	\$192	\$1,275	\$0	\$672	\$0	\$0	\$7,389
	Tech I	120	\$1,800	\$450	\$192	\$0	\$0	\$244	\$0	\$0	\$2,686
	Tech II	120	\$1,440	\$300	\$192	\$0	\$0	\$193	\$0	\$0	\$2,125
	<b>Task 2</b>	Determine juvenile salmon densities and fitness (Jan-May)							\$0		
	Project Management							\$0			
	Month 1	160	\$4,800	\$1,200	\$192	\$5,505	\$0	\$1,170	\$1,000	\$0	\$13,667
	Month 2-5	416	\$12,480	\$3,120	\$403	\$0	\$0	\$1,600	\$0	\$0	\$17,603
	Tech I	616	\$9,240	\$2,310	\$960	\$0	\$0	\$1,251	\$0	\$0	\$13,761
	Tech II	1220	\$14,640	\$3,660	\$1,920	\$0	\$0	\$2,022	\$0	\$0	\$22,242
	<b>Task 3</b>	Determine stranding rates (Apr-May)							\$0		
	Project Management	72	\$2,160	\$540	\$86	\$1,075	\$6,000	\$986	\$0	\$0	\$10,848
	Tech I	120	\$1,800	\$450	\$144	\$0	\$0	\$239	\$0	\$0	\$2,633
	Tech II	240	\$2,880	\$720	\$288	\$0	\$0	\$389	\$0	\$0	\$4,277
	<b>Task 4</b>	Determine predation rates (Apr)							\$0		
	Project Management	64	\$1,920	\$480	\$77	\$1,390	\$0	\$387	\$0	\$0	\$4,254
	Tech I	128	\$1,920	\$480	\$154	\$0	\$0	\$255	\$0	\$0	\$2,809
	Tech II	256	\$3,072	\$768	\$307	\$0	\$0	\$415	\$0	\$0	\$4,562
	<b>Task 5</b>	Report preparation							\$0		
	Project Management	80	\$2,400	\$600	\$32	\$100	\$0	\$313			\$3,445
<b>Total Project Cost</b>			<b>\$64,752</b>	<b>\$16,128</b>	<b>\$5,139</b>	<b>\$9,345</b>	<b>\$6,000</b>	<b>\$10,136</b>	<b>\$1,000</b>	<b>\$0</b>	<b>\$112,500</b>

### Matching Funds

The FFC will provide the use of equipment essential for project completion as a cost share. Specific items to be used include, ATV, three fyke nets, three beach seines, temperature recorders, and water quality meters. The amount of the cost share **was** calculated by dividing the value of the equipment by the expected life span, dividing that dollar value by the length of the project, and adding 15%.

### Explanation of Salaries, Benefits, and Overhead

The Fishery Foundation of California is a non-profit organization with limited staff and without typical employees. To be both cost effective and competitive with other restoration groups and consulting firms, it does not set salaries according to overhead or benefits. Project managers incur most overhead costs associated with their positions including office space, computer equipment and supplies, furniture, vehicle maintenance and health benefits. Approximately 16% of the project managers billing rate is compensation for these overhead costs. Additional field staff, if needed, are hired on a part time basis as dictated by the needs of the project. Staff Benefits cover workers compensation insurance, payroll taxes, and payroll costs. Benefit rates are set to reflect the current rates for employee protection **as** required by state and federal law.

Administrative overhead covers the Executive Directors costs including office space and supplies, accounting costs, and processing fees.

## **2. Cost Sharing**

The FFC will contribute \$8,794.50 to the project by providing needed sampling equipment and transportation throughout the project. An explanation of the cost share is provided in the budget section above.

## **G. Local Involvement**

The FFC **has** been active in Cosumnes River issues for three years and has developed many amicable relationships with various landowners and groups throughout the watershed. Organizations such **as** The Nature Conservancy and The Bureau of Land Management are aware of and support the proposed project (see attached letters of support). Both the Sacramento Board of Supervisors and the Sacramento Planning and Community Development Department have been notified about the project. Any requested coordination with these agencies will be welcomed.

## **H. Compliance With Standard Terms and Conditions**

The FFC understands the standard terms contained in Attachments D and E and will comply with those terms.

## **I. Literature Cited**

Anderson, R. **O** .1976. Management of Small Warm Water Impoundments. Fisheries 1 (6):5-7, 26-28.

Grimaldo, L., Harrell, B., Miller, R., and Z. Hymanson. Determining the Importance of Shallow Water Habitat in the Delta to Resident and Migratory Fishes: A New Challenge for IEP. IEP Newsletter Vol. 11 No. 3 summer 1998.

Grimaldo, L., Peregrine, C., and R. Miller. Examining the Relative Predation Risks of Juvenile Chinook Salmon in Shallow Water Habitat: The Effect of Submerged Aquatic Vegetation. IEP Newsletter Vol. 13 No. 1 winter 2000.

Kennedy, T. and K. Whitener. 1999. Chinook Salmon Use of the Cosumnes River Preserve Floodplain. Report prepared for the Anadromous Fish Restoration Program.

Bjornn, T.C. and D.W. Reiser. 1991. Habitat Requirements of Salmonids in Streams. American Fisheries Society Special Publication. 19: 83-138.

Schlosser, I.J. 1991. Stream Fish Ecology: A Landscape Perspective. Bioscience Vol. 41 No. 10 pp. 704-712

Sommer, T., Nobriga, M., and B. Harrell. 1998. Results of 1997 Yolo Bypass Studies. IEP Newsletter Vol. 11 No. 1 fall 1998.

Williams, P., and Associates. 1997. Analysis of Opportunities for Restoring a Natural Flood Regime on the Cosumnes River Floodplain. A Report Prepared for The Nature Conservancy.

Whitener, K., and T. Kennedy. Evaluation of Fisheries Relating to Floodplain Restoration on the Cosumnes River Preserve. IEP Newsletter Vol. 12 No. 3 summer 1999.

## **J. Threshold Requirements**

Attached are the letters of notification to the appropriate agencies, the environmental compliance and land use checklists, and the permission for access agreements. Additional access agreements will be obtained within 30 days of notification of funding after new sites have been established.



## Attachments

# *FISHERY FOUNDATION OF CALIFORNIA*

---

P.O. Box 271114 / Concord, CA 94527-1114 / (925) 944-9115 / FAX (925) 944-3514

May 15, 2000

Cindy H. Turner  
Clerk of the Board of Supervisors  
700 H Street, Room 2450  
Sacramento CA 95814

Re: CALFED Proposal: Cosumnes River Comparative Rearing Research Project

Dear Ms. Turner:

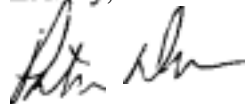
The Fishery Foundation of California (FFC) is requesting funding by the CALFED Bay-Delta Program to conduct targeted fisheries research within Sacramento County, California. The proposed research is to take place within the Cosumnes River from Highway 16 near Rancho Murieta to the Cosumnes River Preserve in Franklin.

Attached is the project proposal which includes the Environmental Compliance Checklist, Land Use Checklist, and details of the project's activities to occur within your area of jurisdiction. The FFC welcomes any comments or questions that would facilitate coordination with Sacramento County on this issue.

Comments or questions may be addressed to:

Trevor Kennedy, Project Manager  
Fishery Foundation of California  
2300 Q Street  
Sacramento CA 95816  
(209) 649-8914

Sincerely,



Patricia Duran  
Executive Director

# *FISHERY FOUNDATION OF CALIFORNIA*

---

P.O. **Box** 271114 / Concord, CA 94527-1114 / (925)944-9115 / FAX (925) 944-3514

May 15,2000

Thomas W. Hutchings, Director  
Planning and Community Development  
827 - 7th Street, Room 230  
Sacramento CA 95814

Re: CALFED Proposal: Cosumnes River Comparative Rearing Research Project

Dear Mr. Hutchings:

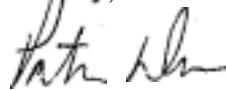
The Fishery Foundation of California (FFC) is requesting funding by the CALFED Bay-Delta Program to conduct targeted fisheries research within Sacramento County, California. The proposed research is to take place within the Cosumnes River from Highway 16 near Rancho Murieta to the Cosumnes River Preserve in Franklin.

Attached is the project proposal which includes the Environmental Compliance Checklist, Land Use Checklist, and details of the project's activities to occur within your area of jurisdiction. The FFC welcomes any comments or questions that would facilitate coordination with Sacramento County on this issue.

Comments or questions may be addressed to:

Trevor Kennedy, Project Manager  
Fishery Foundation of California  
2300 Q Street  
Sacramento CA 95816  
(209) 649-8914

Sincerely,



Patricia Duran  
Executive Director

1. **Do any of the actions included in the proposal require compliance with either the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or both?**

**2. If you answered yes to #1, identify the lead governmental agency for CEQA/NEPA compliance.**

**3. If you answered no to #1, explain why CEQA/NEPA compliance is not required for the actions in the proposals.**

4. If NEPA/CEQA compliance is required, describe how the project **will** comply with either **or** both **of** these laws. Describe where the project is in the compliance **process** and the expected date **of** completion.

5. Will the applicant require access across public or private property that the applicant does not Own to accomplish the activities in the proposal?

Permission **for** access agreements for known research locations have been provided within the proposal.

6. Please indicate what permits **or** other approvals may be required **for** the activities contained in your proposal. Check all boxes that apply.

## None required

Σ

CESA Compliance  
Streambed Alteration Permit  
CWA & 401 certification  
Coastal development permit  
Reclamation Board Approval  
Notification  
Other \_\_\_\_\_  
(please specify)  
None required

\_\_\_ (DFG)  
\_\_\_ (DFG)  
\_\_\_ (RWQCB)  
\_\_\_ (Coastal Commission/BCDC)  
\_\_\_  
\_\_\_ @PC, BCDC)  
\_\_\_  
**X**

**FEDERAL**  
ESA Consultation  
Rivers and Harbors Act permit  
CWA & 404 permit  
Other \_\_\_\_\_  
(please specify)  
None required

\_\_\_ (USFWS)  
\_\_\_ (ACOE)  
\_\_\_ (ACOE)  
\_\_\_  
**X**

## Land Use Checklist

1. Do the actions in the proposal involve physical changes to the land (i.e. grading, planting vegetation, or breaching levees) or restrictions in land use (i.e. conservation easements or placing of land in a wildlife refuge)?

Yes

X  
No

2. If NO to #1, explain what types of actions are involved in the proposal (i.e. research or planning)  
Proposed project is research only.

3. If yes to 1, what is the proposed land use change or restriction under the proposal?  
Not applicable to proposed project.

4. If YES to #1, is the land currently under a Williamson Act contract  
Not applicable to proposed project.

5. If YES to #1, answer the following:

Current land use

Not applicable to proposed project.

Current Zoning

Not applicable to proposed project.

Current general plan designation

Not applicable to proposed project.

6. If YES to #1, is the land classified as Prime Farmland, Farmland of Statewide Importance or Unique Farmland on the Department of Conservation Important Farmland Maps?  
Not applicable to proposed project.

7. If YES to 1, how many acres of Land will be subject to physical change or land use restrictions under the proposal?  
Not applicable to proposed project.

8. If YES to #1 is the property currently being commercially farmed or grazed?  
Not applicable to proposed project.

9. If YES to #8, what are the number of employees/acre Not applicable  
the total number of employees Not applicable

10. Will the applicant acquire any interest in land under the proposal (fee title or a conservation easement)?

Yes

X  
NO

11. What entity/organization will hold the interest? Not applicable to proposed project.

12. If YES to #10, answer the following:

Total number of acres to be acquired under proposal

Not applicable to proposed project.

Number of acres to be acquired in fee

Not applicable to proposed project.

Number of acres to be subject to conservation easement

Not applicable to proposed project.

13. For all proposals involving physical changes to the land or restriction in land use, describe what entity or organization will

manage the property

Not applicable to proposed project.

provide operations and maintenance services

Not applicable to proposed project.

conduct monitoring

Not applicable to proposed project.

14. For land acquisitions (fee title or easements), will existing water rights also be acquired?  
Not applicable to proposed project.

15. ~~Does~~ the applicant propose any modification to the water right or change in the delivery of Water?

        
Yes

  X    
No

16. If YES to #15, describe Not applicable to proposed project.

**NONDISCRIMINATION COMPLIANCE STATEMENT**

STD. 19 (REV. 3-95)

COMPANY NAME

FISHERY FOUNDATION OF CALIFORNIA

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), medical condition (cancer), age (over 40), marital status, denial of family care leave and denial of pregnancy disability leave.

**CERTIFICATION**

*I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.*

OFFICIAL'S NAME


Patricia Duran

DATE EXECUTED

5/5/00

EXECUTED IN THE COUNTY OF Contra Costa

PROSPECTIVE CONTRACTOR'S SIGNATURE



PROSPECTIVE CONTRACTOR'S TITLE

Executive Director

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Fishery Foundation of California



# APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

<b>1. TYPE OF SUBMISSION:</b> <input type="checkbox"/> Application <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		<b>2. DATE SUBMITTED</b> May 15, 2000		Applicant Identifier	
<input type="checkbox"/> Preapplication <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction		<b>3. DATE RECEIVED BY STATE</b>		State Application Identifier	
		<b>4. DATE RECEIVED BY FEDERAL AGENCY</b>		Federal Identifier	

<b>5. APPLICANT INFORMATION</b> Legal Name: <b>Fishery Foundation of California</b>		Organizational Unit: <b>n/a</b>	
Address (give city, county, State, and zip code): <b>PO Box 271114</b> <b>Concord CA 94527-1114</b>		Name and telephone number of person to be contacted on matters involving this application (give area code) <b>925/944-9115</b> <b>Pat Duran</b>	

<b>6. EMPLOYER IDENTIFICATION NUMBER (EIN):</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;">             94-2987019           </div>	<b>7. TYPE OF APPLICANT: (enter appropriate letter in box)</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">             A. State              B. County              C. Municipal              D. Township              E. Interstate              F. Internunicipal              G. Special District           </div> <div style="width: 45%;">             H. Independent School Dist.              I. State Controlled Institution of Higher Learning              J. Private University              K. Indian Tribe              L. Individual              M. Profit Organization              N. Other (Specify) <u>non-profit</u> </div> </div>
--	--

<b>a. TYPE OF APPLICATION</b> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision <input type="checkbox"/> If Revision, enter appropriate letter(s) in box(es) <input type="checkbox"/> <input type="checkbox"/> A. Increase Award    B. Decrease Award    C. Increase Duration O. Decrease Duration    Other (specify): _____	<b>. NAME OF FEDERAL AGENCY</b>  
--	---

<b>10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;">             00-0000           </div>	<b>1. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:</b> <b>Cosumnes River Comparative Rearing Research Project</b>
---	---

<b>12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.):</b> <b>Sacramento County</b>		<b>13. PROPOSED PROJECT</b> Start Date: 10/00    Ending Date: 6/01	
--	--	---	--

<b>14. CONGRESSIONAL DISTRICTS OF</b> <b>7 and 11</b>	<b>b. Project</b> <b>7 and 11</b>
--	--------------------------------------

<b>15. ESTIMATED FUNDING:</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>a. Federal</td><td>\$ 103,705</td></tr> <tr><td>b. Applicant</td><td>\$ 8,795</td></tr> <tr><td>c. State</td><td>\$</td></tr> <tr><td>d. Local</td><td>\$</td></tr> <tr><td>e. Other</td><td>\$</td></tr> <tr><td>f. Program Income</td><td>\$</td></tr> <tr><td>g. TOTAL</td><td>\$ 112,500</td></tr> </table>	a. Federal	\$ 103,705	b. Applicant	\$ 8,795	c. State	\$	d. Local	\$	e. Other	\$	f. Program Income	\$	g. TOTAL	\$ 112,500	<b>16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?</b> a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____ b. No. <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW
a. Federal	\$ 103,705														
b. Applicant	\$ 8,795														
c. State	\$														
d. Local	\$														
e. Other	\$														
f. Program Income	\$														
g. TOTAL	\$ 112,500														

<b>17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?</b> <input type="checkbox"/> Yes    If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
--	--

<b>18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.</b>		
<b>a. Type Name of Authorized Representative</b> <b>Patricia Duran</b>	<b>b. Title</b> <b>Executive Director</b>	<b>c. Telephone Number</b> <b>925/944-9115</b>
<b>d. Signature of Authorized Representative</b> 		<b>e. Date Signed</b> <b>5/15/00</b>

# BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

## SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Site Selection		\$	\$	\$ 11,127	\$ 1,073	\$ 12,200
2. Density Determ.				61,968	5,505	67,473
3. Stranding/Pred				27,165	2,217	29,382
4. Report Prep				3,445	-0-	3,445
5. Totals		\$	\$	\$ 103,705	\$ 8,795	\$ 112,500

## SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1) Site Selection	(2) Density	(3) Strand/Pred	(4) Report	
a. Personnel	\$ 7,440	\$ 41,160	\$ 13,752	\$ 2,400	\$ 64,752
b. Fringe Benefits	1,800	10,290	3,418	600	16,128
c. Travel	576	3,475	1,056	32	5,139
d. Equipment		1,000			1,000
e. Supplies	1,275	5,505	2,465	100	9,345
f. Contractual			6,000		6,000
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a-6h)	11,091	61,430	26,711	3,132	102,364
j. Indirect Charges	1,109	6,043	2,671	313	10,136
k. TOTALS (sum of 6i and 6j)	\$ 12,200	\$ 67,473	\$ 29,382	\$ 3,445	\$ 112,500

7. Program Income	\$	\$	\$	\$	\$
-------------------	----	----	----	----	----

Authorized for Local Reproduction

Standard Form 424A (Rev. 7-97)  
Prescribed by OMB Circular A-102

SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. Site Selection	\$ 1,073	\$	\$	\$ 1,073	
9. Determine Densities	5,505			5,505	
10. Stranding/Predation	2,217			2,217	
11.					
12. TOTAL (sum of lines 8-11)	\$ 8,795	\$	\$	\$ 8,795	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 103,705	\$ 11,127	\$ 61,968	\$ 30,610	\$
14. Non-Federal	8,795	1,073	5,505	2,217	
15. TOTAL (sum of lines 13 and 14)	\$ 112,500	\$ 12,200	\$ 64,473	\$ 32,827	\$
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16.	\$	\$	\$	\$	
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)	\$	\$	\$	\$	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges: 102,364		22. Indirect Charges: 10,136			
23. Remarks:					

**ASSURANCES- NON-CONSTRUCTION PROGRAMS**

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040). Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

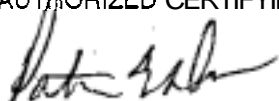
1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to, prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation

Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL



TITLE

Executive Director

APPLICANT ORGANIZATION

Fishery Foundation of California

DATE SUBMITTED

5/5/00

U.S. Department of the Interior

Certifications Regarding Debarment, Suspension and  
Other Responsibility Matters, Drug-Free Workplace  
Requirements and Lobbying

Persons signing this form should refer to the regulations referenced below or complete instructions:

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions - The prospective primary participant further agrees by submitting this proposal that it will include the clause titled, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. See below for language to be used; use this form for certification and sign; or use Department of the Interior Form 1954 (DI-1954). (See Appendix A of Subpart D of 43 CFR Part 12.)

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions - (See Appendix B of Subpart D of 43 CFR Part 12.)

Certification Regarding Drug-Free Workplace Requirements - Alternate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12.)

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

---

PART A Certification Regarding Debarment, Suspension, and Other Responsibility Matters -  
Primary Covered Transactions

---

**CHECK X IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE.**

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
  - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
  - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

---

PART B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -  
Lower Tier Covered Transactions

---

**CHECK — IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.**

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

---

**PART C** Certification Regarding Drug-Free Workplace Requirements

---

*CHECK? IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.*

Alternate I. (Grantees Other Than Individuals)

A. The grantee certifies that it ~~will~~ or continue to provide a drug-free workplace by:

- (a) ~~Publishing a statement notifying~~ employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that ~~will~~ be taken against employees for violation of such prohibition;
- (b) Establishing an ongoing drug-free awareness program to inform employees ~~about--~~
  - (1) The dangers of drug abuse in the workplace;
  - (2) The grantee's policy of maintaining a drug-free workplace;
  - (3) Any available drug counseling, rehabilitation, and employee assistance program's; and
  - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) ~~Making a requirement that each~~ employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) ~~Notifying the employee~~ in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee ~~will --~~
  - (1) Abide by the terms of the statement; and
  - (2) ~~Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;~~
- (e) ~~Notifying the agency in writing,~~ within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) ~~Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted --~~
  - (1) ~~Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or~~
  - (2) ~~Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;~~
- (g) ~~Making a good faith effort to continue~~ to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Check ☐ if there are workplaces on file that are not identified here.

---

**PART D** Certification Regarding Drug-Free Workplace Requirements

---

*CHECK -- IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS AN INDIVIDUAL.*

Alternate II. (Grantees Who Are Individuals)

- (a) The grantee certifies that, as a condition of the grant, he or she ~~will~~ not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant;
- (b) ~~If convicted of a criminal drug offense~~ resulting from a violation occurring during the conduct of any grant activity, he or she ~~will report the conviction, in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.~~

DI-2010  
March 1995  
(This form consolidates DI-1953, DI-1954,  
DI-1955, DI-1956 and DI-1063)

---

**PART E: Certification Regarding Lobbying**  
**Certification for Contracts, Grants, Loans, and Cooperative Agreements**

---

CHECK ☐ IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANTOR COOPERATIVE AGREEMENT, SUBCONTRACT, OR SUBGRANT UNDER THE GRANTOR COOPERATIVE AGREEMENT.

CHECK ☐ IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANTOR SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

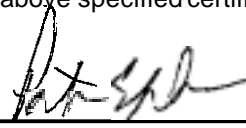
The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL



TYPED NAME AND TITLE Patricia E. Duran, Executive Director

DATE May 5, 2000

DI-2010

March 1995

(This form consolidates DI-1953, DI-1954.

DI-1955, DI-1956 and DI-1963)





**Cosumnes River Preserve**

13501 Franklin Boulevard  
Galt, California 95632  
916.684.2816 • telephone  
916.683.1702 • facsimile  
info@cosumnes.org  
www.cosumnes.org

May 10,2000

Trevor Kennedy  
Project Manager  
The Fishery Foundation of California  
P.O. Box 271 14, Concord CA 94572

Dear Trevor,

I have reviewed your study plan for targeted research on three properties managed by the Cosumnes River Preserve. I am granting you permission to access the properties and conduct studies on lands owned by The Nature Conservancy (levee break field), Sacramento County (triangle field) and California Department of Fish and Game (Shaw forest). The only condition is that you update your existing Cosumnes River Preserve access permit to include the Fish and Game property. All conditions of your existing permit will remain the same.

Sincerely

Rick Cooper  
Preserve Manager

**Cooperators**

Bureau of Land Management • Ducks Unlimited • California Department of Fish and Game • California Department of Water Resources  
California Wildlife Conservation Board • County of Sacramento, Department of Regional Parks, Recreation and Open Space • PacTrust • The Nature Conservancy

Landowner **Access** Agreement

May 8, 2000

I, Mel Onetto having reviewed the **study** plan outlined by The Fishery Foundation of California (FFC) have granted permission ~~for the FFC~~ **use** my property as the primary **access** point to conduct targeted research within the following property.

1. Secondary Channel (Old Growth **Oak** Riparian Forest) North of the **Cosumnes** River at approximately river mile 6. The land is owned by the California **Department of Fish** and Game and administered by the **Bureau** of Land Management (BLM) and The Nature Conservancy (**TNC**). It is understood that the FFC will obtain landowner access agreements from the aforementioned parties prior to **entering** said properties.

Mel Onetto

Mel Onetto Date 5/9/00

On condition of *this* agreement, The FFC agrees to **abide** by any rules and/or regulations set forth by Mel Onetto for **use of the** aforementioned property.

Trevor Kennedy  
Project Manager, FFC.

Trevor Kennedy Date 5/9/00



Cosumnes River Preserve  
13501 Franklin Boulevard  
Galt, California 95632

International Headquarters  
Arlington, Virginia

TEL 916 683-2142  
FAX 916 683-1702

May 12, 2000

Trevor Kennedy  
Project Manager  
The Fishery Foundation of California  
P.O. Box 271114  
Concord, CA 94527

Dear Mr. Kennedy,

I am writing on behalf of The Nature Conservancy's Cosumnes River Preserve to express our support for The Fishery Foundation's proposal to continue research on juvenile chinook salmon rearing on the Cosumnes River. Since 1984, TNC has been committed to the protection and restoration of critical habitats along the Cosumnes River. To date, the Cosumnes River Preserve encompasses approximately 40,000 acres, which includes critical habitats needed by chinook salmon for spawning and rearing.

Restoration on the Preserve has included the development of floodplain and shady riverine aquatic habitats. Preliminary research by TNC and The Fishery Foundation has shown that juvenile chinook salmon use these newly restored habitats. However, the dynamics of this utilization is poorly understood and research of the nature proposed by The Fishery Foundation can greatly improve our knowledge of juvenile salmonid rearing. This knowledge, in turn, can be used by TNC and our partners to help determine the future of restoration on the Preserve and how it can be better directed towards the needs of chinook salmon.

We look forward to continuing our cooperation with The Fishery Foundation as they provide important research on salmon rearing on the Cosumnes River.

Sincerely,

A handwritten signature in dark ink, appearing to read "Keith Whitener".

Keith Whitener  
Project Ecologist

